

IBC Multiple Use Options

(Steps vary according to whether designer has selected type of construction, number of stories or area first. Also see the Mixed Occupancies Worksheet.)

Incidental uses - Certain higher risk uses must be separated, sprinklered or both. Do not use the accessory use option. Alternatively, the appropriate occupancy classification may be assigned to the incidental use to some of them and a Mixed Use option (below) may be used. IBC 302.1

Accessory uses - Except for Group H occupancies, uses that are accessory to the main occupancy may be up to 10% of the floor area on a story, or also for Group A accessory uses up to 50 occupants or 750 sq. ft, without being separated. The height or area of an accessory use shall not exceed its Table 503 value. Note that unlimited area buildings could have large allowable accessory uses up to the applicable Table 503 value.

Mixed Use Options:

Non-separated Use Option (not available to H occupancies) IBC 302.3.2

- Apply most restrictive type of construction, height and area requirements to the building as a whole or to the fire area
- Apply other requirements to the specific occupancy areas
- Apply fire protection thresholds and requirements based on each use to the whole building. Unless separated with fire barriers, a fire area includes multiple floors.
- Apply the most restrictive high rise requirements of s. 403 to the whole building
- Apply the exterior wall requirements according to the specific occupancy contained behind the wall
- Several non-separated uses may create a fire area in a building

Separated Use Option - creates separate fire areas IBC 302.3.3

- There is no requirement to separate like uses [same occupancy group & subgroup], even if under separate ownership, but separating them will reduce the fire area, which certain other requirements are based on
- If multi-story, determine the minimum class of construction for each occupancy on **its floor**
- Apply most restrictive type of construction requirements to the whole building
- Cannot take sprinkler increase unless the whole building is completely sprinkler protected
- Can apply the frontage increases based on the total building perimeter, not just the perimeter of the individual occupancies
- Apply the exterior wall requirements according to the specific occupancy contained behind
- If several occupancies are on the same floor, then need to pro-rate the allowable areas so that the sum of the fractions of actual to allowable areas does not exceed 1. (Note that if occupancy is allowed unlimited table area, then ignore it in this calculation.)
- Apply fire protection thresholds and then the requirements to fire area or building as indicated.

Firewall-Separated Uses - creates separate buildings

- Apply type of construction requirements, height and area requirements to each part separately
- Apply fire protection requirements to each part as separate buildings
- Sprinklering credit may apply to just the sprinkler protected portion

Other Relevant Code Sections:

Section 307.2 and 415 H uses - If hazardous material is kept to less than what is allowed in a control area or fire barriers are provided to create control areas up to what is allowed by the code, then there is no separate H occupancy.

Section 402 Shopping Malls - Requires a one-hour fire partition between tenant spaces of a shopping mall.

Section 415.3.2 - Requires that all H-1 occupancies and certain H-2 and H-3 occupancies be in separate buildings.

Section 507.5 H-2, H-3 & H-4 occupancy in an unlimited area building - In an F or S occupancy, an H fire area located on the building perimeter can be the lesser of 10% of building area or Table 503, as modified for frontage **on the H fire area only**. If the H fire area is not on the building perimeter, then only 25% of the Group H-2, H-3 or H-4 Table 503 area is allowed.

Section 508 Options - This section has several options that permit a 3-hour horizontal separation between a parking garage with independent means of egress and certain other occupancies to create separate buildings for purposes of height & area, class of construction and sprinkler protection.